Incorporating Human Dimensions into Joint Venture Implementation Plans

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Purpose and Contents

As part of their vision for the future, Migratory Bird Joint Venture Coordinators have called for further integration of human dimensions (HD) into Joint Venture (JV) implementation plans. While some JVs have limited experience with HD and are just beginning to develop related research agendas and strategies, others have actively included information about the human context of conservation in their work. **By conducting landowner research and partnership surveys or integrating social data layers into their efforts, some JVs have been able to improve their conservation planning, delivery, and outcomes.** The purpose of this document is to help JVs incorporate HD information into their implementation plans by providing:

Understanding Human Dimensions

Human dimensions, defined most broadly, refers to "**everything in conservation that is not about wildlife and habitats**" (adapted from Decker, Riley, & Siemer 2012). This includes the cultural, legal, political, economic, and social constraints and opportunities that influence both the status of wildlife populations and the feasibility and success of conservation efforts. Human dimensions can also be understood as **an interdisciplinary field of study that applies various social sciences to examine research questions that have implications for the management and conservation of wildlife** (Manfredo 2008; Bennett et al. 2017). HD theory and research incorporate many other disciplines, including those shown in **Figure 1**, and often combine these social sciences with insights from the biological sciences.

Figure 1. This figure shows various social science fields that contribute to the applied field of human dimensions.

HD research makes use of a **variety of tools and methodologies**, including surveys, interviews, observations, document or web content analysis, and focus groups (For more information on these methods, see Connelly et al. 2012). When the field of Human Dimensions of Natural Resources emerged in the 1970s and 1980s, it focused primarily on recreation, wildlife conflict, and harvest management by wildlife management agencies. Broader applications of HD to bird conservation have been more recent. **The field of HD now offers theories, methods, and information to better understand human perceptions and behaviors, the driving forces behind them, and how human behaviors can benefit or act as barriers to conservation success**.

Why HD Information is Integral to Achieving JV Conservation Goals

Over the past few years, various entities within the bird conservation community have released conservation plans that call for more extensive attention to the social context of bird conservation and an expansion of HD research, including:

> The 2012 **North American Waterfowl Management Plan** (NAWMP) revision, *People Conserving Waterfowl and Wetlands*, refers to the three–legged stool of conservation as including people, habitat, and birds. To implement NAWMP's goal of "Growing the number of waterfowl hunters, other conservationists, and citizens who enjoy and actively support waterfowl and wetlands conservation," the NAWMP Plan Committee and the National Flyway Council jointly organized a Human Dimensions Working Group and Public Engagement Team to address the HD research needs in waterfowl and wetlands conservation.
>
> **Partners in Flight**'s *Saving Our Shared Birds: A Tri-national Vision for Landbird Conservation* also highlights social science research needs. These include understanding how and why people relate to birds and bird conservation issues. More specific HD needs include understanding (1) conservation outcomes achieved from birding tourism; (2) societal valuation of ecosystem services; (3) costs and benefits of conservation-oriented management practices; and (4) outcomes of conservation education programs.
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> In 2015, the **North American Bird Conservation Initiative (NABCI)** U.S. Committee created a Human Dimensions Subcommittee. As of January 2017, NABCI partners support a full-time National Bird Conservation Social Science Coordinator position to aid in building social science capacity for the entire bird conservation community.

Integration of HD includes exploring what people think and do related to conservation, incorporating that understanding into decision-making about conservation policies and programs, and evaluating the impact of those efforts on both human behavior and conservation targets. Comparable to biological information, **HD information can be a valuable addition in every phase of the Strategic Habitat Conservation (SHC) work of JVs, from research and planning to design, delivery, monitoring, and evaluation** (**Figure 2**). HD thus can and should be a component of an adaptive management process. HD research, particularly when it involves forms of stakeholder engagement, can also help JVs develop ecologically- and socially-informed goals (Sexton et al. 2013).

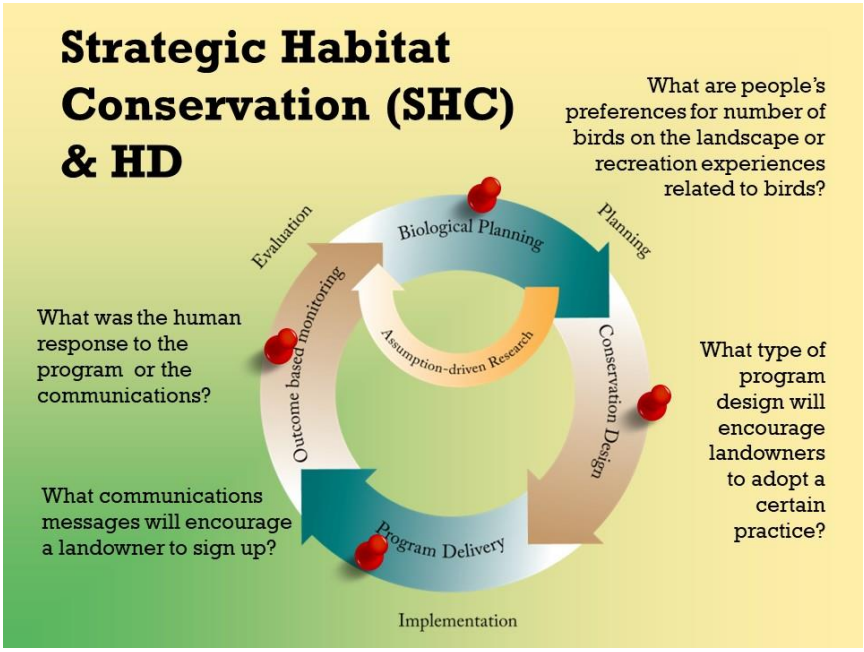


Figure 2. HD research can help improve all aspects of the work of a Migratory Bird JV (Dayer & Meyers 2016).

Sources of Existing HD Information

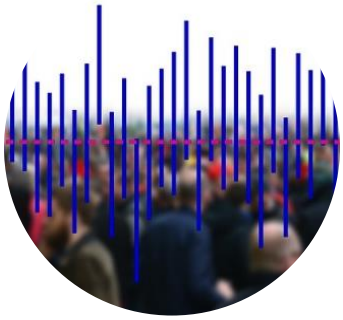
The use of existing HD information is an approach to HD integration that is accessible to all JVs and can be both cost- and time-effective. The following list provides information on utilizing existing sources of HD material, why each source is applicable to JVs, where this information may fit into an implementation plan, and how to access this information. This list is not exhaustive, but it provides a good foundation of relevant existing information.

Historical contexts, including the land use, settlement, and cultural history of people within the JV, can help JVs better understand how people in the region relate to birds and bird conservation and how they have responded to bird conservation issues or management actions in the past. This history can inform how JVs engage with communities on contemporary issues. Knowledge of the historical context of an area can also facilitate the identification of groups who may have knowledge about particular birds or ecosystems or a stake in conservation programs. For example, understanding the history of land tenure in a region might bring to light indigenous or other groups that historically used or managed the species and have knowledge about its past or present status.

Sources: Historical documents and books, local environmental history publications

Governance structures, including federal, state, county, and municipal policies, as well as formal and informal rules and social norms, shape how people interact with nature and wildlife. Awareness of the constraints and opportunities created by these structures will help JVs design more effective bird conservation programs. JVs can also incorporate policy-related strategies into their implementation plans, in an effort to influence policies that impact birds and bird habitats.

Sources: Local and regional government documents such as Council meeting minutes, ordinances, building and zoning codes, and tax documents



Human demographics are an important part of the social landscape for the work of JVs. JV implementation plans often include a bioregional or ecological context section. Since humans also live in these areas, it can be valuable to include measures of human populations along with measures of bird populations. Considering human population densities, indices of diversity, levels of affluence or poverty, political affiliations, trends in population growth, and other demographic factors can result in the design and delivery of more effective conservation activities. For example, bird conservation problems and their solutions will differ between an affluent and densely populated city and a lower-income, rural area.

Sources: U.S. Census

Growth and development pressures from human populations have the potential to affect both birds and habitats. Identifying where and when development and population growth may occur can help JVs target their habitat conservation initiatives or implement communications efforts with communities or developers. These strategies can ensure that development proceeds in a manner that benefits both people and birds whenever possible.

Sources: Development plans at county or municipal offices

Social contexts, particularly people's connection with and beliefs about nature and wildlife, set the backdrop for all bird conservation efforts. What people believe about the relationship between humans and the natural world; the barriers they face in engaging in wildlife recreation or conservation behaviors; and the experiences they have had with wildlife influence public support for conservation and can thus impact the success of JVs. Importantly, these relationships differ across races, ages, geographies, and political affiliations, and they have changed over time. Considering these shifting social contexts will make it possible for JVs to communicate with people in terms that matter to them and to identify approaches to bird conservation that are consistent with public values.

Sources: National social science studies including The Nature of Americans and America's Wildlife Values (especially state-level reports)

Wildlife recreation information can help JVs understand trends in recreation participation in their regions, including how people spend money, how they participate in conservation, and what controls satisfaction with outdoor recreation opportunities. This HD information can inform the development of JV strategies that work with and for recreationists, especially those who engage in bird conservation-related recreation (i.e. hunting and birdwatching).

Sources: National Survey of Fish & Wildlife Related Recreation (including topical reports & state reports); NAWMP survey of hunters, birdwatchers, and the public; visitor surveys and recreation plans from federal lands in the region (especially National Wildlife Refuges)

Public opinion on specific issues and ballot measures at national, regional, or local levels can inform strategic actions by JVs in support of their implementation plans. For example, public opinion on water or land conservation measures might bolster fundraising efforts, shape outreach and communications approaches, or prompt additional focus on particular conservation strategies in the implementation plan with broad public support.

Sources: Polls (such as this poll that examined views about water supply in CA); specific surveys conducted by partner organizations or academic institutions in the region

Private landowner characteristics, including their management activities, motivations, demographics, and environmental concerns, are key to achieving bird conservation success. The majority of the landscape in many JVs is in private ownership. JVs must thus understand how and why landowners make the management decisions they do. There is a large body of HD literature that examines the predictors and motivations of landowner conservation behavior. This literature can inform JV conservation implementation and help build partnerships that are more effective with private landowners for bird and habitat conservation.

Sources: National Woodland Owner survey; Agricultural Resource Management Survey (national survey of farmers/ranchers); Bureau of Land Management (BLM) ownership data; information from NGOs and foundations that engage private landowners on a regional or national scale (e.g., American Forest Foundation)

JV Examples along the Spectrum of HD Integration

Because JVs have different budgets, needs, and social science capacity on staff, HD integration can occur along a spectrum of resource intensity. This spectrum can range from using existing census and human demographic information to working with social scientists to develop original research, needs assessments, or an implementation plan chapter. In this section, we highlight examples along this spectrum that demonstrate ways that various Migratory Bird JVs are already integrating HD into their implementation plans.

Characterizing the social landscape with existing HD information

Intermountain West Joint Venture (IWJV) used **existing human dimensions information to characterize the social landscape** in the Characterization of the IWJV Landscape chapter in their 2013 implementation plan. This information allowed them to **detail threats and human activities** in each ecological region that makes up the IWJV landscape. They did this by compiling information from BLM ownership data and EPA ecoregion data to determine which human activities in the region may affect their JV conservation goals. They also included a section about **land ownership** since this information is often related to particular habitat types due to land management and land use policies.

Integrating social data into a spatial decision support tool

Upper Mississippi and Great Lakes Joint Venture (UMGLJV) described **a process for integrating HD objectives into waterfowl habitat delivery** in their recently revised Waterfowl Habitat Conservation Strategy (in the section entitled: *Target Conservation for Waterfowl and People*) (Soulliere et al., 2017). Starting with an objective matrix, UMGLJV scientists transformed related biological and social data into a family of **spatially explicit, model-based maps** designed to achieve different **biological and social objectives**. Social science objectives included retention and recruitment of waterfowl hunters and viewers, and reducing watershed impairments. Output maps depicting individual objectives were weighted based on **discussion with regional decision makers** (JV Management Board) and then combined, resulting in an aggregate decision support tool to target conservation that benefits waterfowl and people in the JV region (Figure 3). The process was developed so objectives and weights may be **easily adjusted depending on changing stakeholder priorities**. Finally, the system also allows individual JV partners to scale down the decision matrix, with adjustments to better reflect more specific or localized partner priorities (e.g., breeding waterfowl within a state, endangered species).

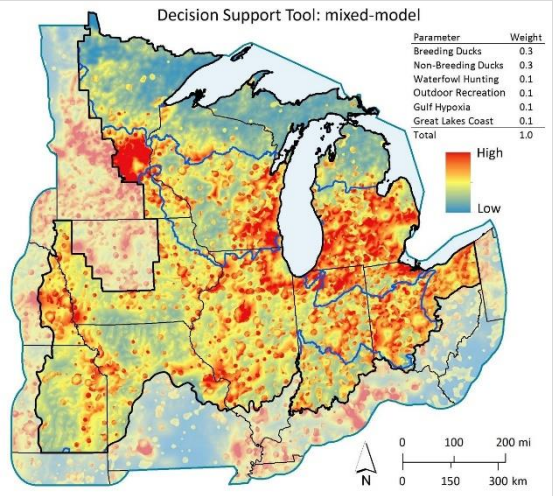


Figure 3. Decision support tool to target waterfowl habitat conservation in the UMGLJV region based on two biological and four social objectives weighted for regional priority. State and Bird Conservation Region (BCR) boundaries (black and blue lines) designate the State x BCR polygons linked to habitat retention and restoration objectives in the 2017 JV Waterfowl Habitat Conservation Strategy. Red indicates highest areas of highest priority for conservation delivery.

Conducting a stakeholder analysis for targeted communications and engagement

San Francisco Bay Joint Venture (SFBJV) employed a **stakeholder analysis exercise** with their Implementation Planning Team to identify priority audiences for their implementation plan (IP) revision to increase the utility of the plan and achieve SFBJV bird and habitat conservation goals. This stakeholder analysis involved 3 steps: an open-ended brainstorming session to **determine target audiences** for the IP; **plotting and prioritizing these audiences** on an interest and impact graph; and creating a **participation planning matrix to determine communication and engagement strategies** for each audience. The exercise itself was team-building and helped the IP Team set expectations for both the content and outreach for the plan. The results will also help inform the type and content of any supporting materials used to promote the IP revision among priority audiences.

Spatializing socioeconomic data for targeted outreach

Oaks and Prairies Joint Venture (OPJV) partners conducted a **Human Landscape Assessment** by **intersecting GIS-based grassland bird habitat and socioeconomic data**. OPJV staff working with **university partners** did this by initially selecting clusters of parcel property that contained at least 100 acres of upland grassland habitat. They then **identified groups of people who had similar values on a variety of socioeconomic data indicators** to those already participating in a private lands conservation program, the Grassland Restoration Incentive Program (GRIP). These zip code-based socioeconomic data indicators included factors such as income, education, and participation in consumptive and non-consumptive outdoor recreation activities. The assumption is that **selected landowner clusters would be more likely to participate in GRIP and other conservation programs**; thus, bird conservation practitioners could increase enrollment in these programs in the future to meet objectives identified in the OPJV Grassland Bird Conservation Business Plan (https://www.opjv.org/about_us) by targeting these identified landowners. OPJV staff are currently working with the Texas Parks and Wildlife Department to add a **High Opportunity Outreach Program** by using a **mail survey to validate and calibrate the spatial model** of potential landowners in one of our 40 focal counties as a proof of concept project to guide future work.

Conducting an audience assessment for communications planning

Intermountain West Joint Venture (IWJV) implemented a **communications planning process** including **expert opinion and interviews of audience groups** that informed their IWJV Strategic Communications Plan. Through this process, IWJV **hired a consultant** to conduct a **needs assessment workshop** to help develop the JV's communication goals. They then identified key stakeholder groups necessary to address the overall objective of the JV. To develop appropriate communications objectives by audience, they conducted an extensive **audience assessment** through expert opinion and interviews of stakeholder groups to understand each group and the most effective means to communicate with them. These assessments then informed the creation of **strategic communication campaigns** to achieve conservation objectives.

Using Open Standards for the Practice of Conservation to consider HD

Sonoran Joint Venture (SJV) used the **Open Standards for the Practice of Conservation** to guide the development of their Conservation Implementation Plan, which combines biological conservation priorities currently in the SJV Bird Conservation Plan with the HD issues of importance to the JV. Using this planning approach allowed SJV staff to understand the ways in which they must work with people to conserve birds and habitats in the region. Many successful conservation efforts work to change human behavior, and this process **explicitly considered the social, economic, and political drivers of conservation threats to priority birds and habitats** in the SJV region. This allowed the SJV to develop strategies that best address these threats and contributing factors. The Open Standards framework also **incorporated ecosystem services and their connections to quality of life, health, security, and livelihoods**, which can improve both strategic communication efforts and conservation actions.

Much like Strategic Habitat Conservation, the Open Standards framework provides **a systematic approach to planning, implementing, and monitoring conservation efforts** that allows SJV to understand **what is working and what needs adjusting** along the way. The Open Standards were created by the Conservation Measures Partnership, a consortium of conservation organizations and collaborators that strives to improve the practice of conservation by developing, testing, and promoting principles and tools to credibly assess and improve the effectiveness of conservation actions. A global network of trained conservation coaches offers training, facilitation, and guidance. Learn more about this process here: http://cmp-openstandards.org/.

Photo by Steve Berardi

Collaborating with consultants on an HD IP chapter

Central Valley Joint Venture (CVJV) conducted an HD **needs assessment and literature review** to develop a human dimensions chapter. Working with consultants, CVJV developed an **HD chapter** for their most recent implementation plan revision (Dayer & Meyers, 2016). The consultants reviewed CVJV guiding documents and met with the CVJV staff and partners to **assess the priority areas for HD research** for the JV. The priority topics focused on HD aspects of *four key stakeholder groups* (hunters, farmers, non-hunting recreationists, and urban residents) and *three key issues* (ecosystem services, environmental justice, and multiple benefits). The consultants then conducted an **extensive literature review** to identify and succinctly summarize findings from the HD research relevant to wildlife conservation. They concentrated on literature from the Central Valley and California, but presented regional or national results where relevant and important. Finally, they **provided recommendations** that informed the content of other strategies for conservation implementation and chapters throughout the plan. With feedback from CVJV staff and partners, they recommended **next steps for HD research to fill important gaps in knowledge**, relevant to the work of the CVJV.

Performing HD research to inform communications and conservation strategies

Playa Lakes Joint Venture (PLJV) **engaged HD scientists to conduct research about the knowledge, attitudes, and willingness of landowners in their region to conserve playas**. They then integrated these survey results into their implementation plan. Results from a 2006 survey of 1,800 landowners, showed that knowledge about playas varied across the region. Of landowners who knew what a playa was, only half knew that playas recharged the High Plains (Ogallala) Aquifer. Finally, landowners thought the only natural resource needing more conservation was the Ogallala Aquifer. Based on these results, PLJV **shifted their communication focus** to educating about playas and the importance of playas to recharging the Ogallala Aquifer.

In a follow-up study in 2013, PLJV conducted **focus groups** in 13 areas across the JV and confirmed the Ogallala was still the primary conservation concern in the region, but landowners had many questions about if and how aquifer recharge could benefit them. Based on conversations with hydrologists, which led to a better understanding of recharge, PLJV **refocused communications** to highlight the various recharge benefits in areas where the aquifer is in immediate danger of "going dry."

This research has been **incorporated in the PLJV Implementation Plan** through several conservation strategies. The first is an effort to **work with towns and cities** that get most of their water supply from the Ogallala Aquifer to incorporate playa conservation into sustainable water plans for these municipalities. A second strategy is to **focus delivery of conservation programs** in areas that are projected to run out of water in the near future and to focus communication about these programs on water conservation since this is **the issue that most resonates with landowners**. For example, focusing on a cost-share program that promotes planting an irrigated field back to grass conserves water and grassland birds while supporting livelihoods by providing assistance to switch to a grazing operation.

Co-producing conservation recommendations with communities

Intermountain West Joint Venture (IMJV) secured funding and launched its first project to integrate conservation social science into conservation delivery and decision support in 2017. The project's purpose was to **align conservation program delivery with the interests, values, and motivations of private landowners** engaged in flood irrigation on working wet meadows (i.e., wetland habitat important to migratory birds that is largely maintained by agricultural practices). The research project involved **local conservation practitioner planning teams** and **landowner-focused workshops**. These workshops were originated by Partners for Conservation for applied purposes, but follow principles for effective **community engagement** discussed in the scholarly literature. A webinar summarized the results and recommendations from this work, and an associated research report and journal article are being prepared. Conservation delivery recommendations, which were **co-produced with landowners, conservation practitioners, and conservation social scientists**, are currently being integrated into the IWJV's annual operational plans and partners' communications, policy, conservation delivery, and partnership efforts to help advance conservation objectives.

Photo by Greg Kramos / USFWS

Writing a Human Dimensions Chapter

In this section, we suggest some steps that JVs can follow to create a human dimensions chapter within their implementation plans. Realizing again that each JV has different financial resources and social science capacity, we have included multiple strategies at each step of the process to cover a spectrum of integration and involvement.

1. Find human dimensions collaborators

We encourage JVs to **work with HD professionals to interpret and integrate HD information** into implementation plans. These experts can provide advice on social science content to include and suggestions for where to find this information. Depending on your budget, you may be able to hire a social scientist as a consultant to conduct research to help determine your JV's HD needs and write the chapter. Alternatively, you can **partner with HD researchers** or **consider adding HD professionals to your management board** or science advisory team.

You can connect to social scientists by joining the **North American Bird Conservation Initiative's Human Dimensions Subcommittee** and contacting the National Bird Conservation Social Science Coordinator, Jessica Barnes (jcbarnes@vt.edu).

If your JV includes U.S. Fish & Wildlife Services staff, you can find a collaborator within the Service through the **FWS social science expert directory**, developed by the USFWS Human Dimensions Branch.

Other sources for HD information and expertise include:

- Society for Conservation Biology Social Science Working Group's email list
- The Wildlife Society's Human Dimensions Working Group
- HDGov: a multi-agency website for all things human dimensions of natural resources. This website includes training resources such as videos, podcasts, and newsletters as well as an HD blog series and news and announcements.

2. Identify your human dimensions issues

With the help of HD collaborators, **determine which issues to address** or acknowledge in your implementation plan chapter. A good starting point is to consult with your staff, management board, technical committee, and partners to **devise a list of HD issues and related stakeholder groups that affect the conservation priorities of your JV**. You can conduct these assessments as part of a management board meeting or other relevant committee meetings. You can also conduct assessments via phone or through one-on-one conversations, though this requires more time. If you have the capacity, you can work with social science experts to perform a more formal needs assessment such as a nominal group technique. This is a decision-making process in which ideas are solicited from all members of a group; collective priorities are then efficiently determined through voting.

3. Explore the HD literature and existing information on relevant HD topics

Once the HD needs of your JV have been identified, work with your HD collaborator(s) to **search for existing HD literature** related to those issues. If you do not have access to scientific publications, make sure to **work with a collaborator who has access** to this information (such as a university partner). In this step, you can also use existing HD information related to your needs, such as those highlighted in the "Sources of Existing HD Information" section of this document.

4. Determine what insights you can take from existing sources to inform your strategies

Consider how the HD literature and other existing information sources you have accessed can inform your **conservation, communication, policy, and stakeholder engagement strategies**. At this stage, it is also essential to **perform a gap analysis** to determine what new HD information you may need to achieve the aforementioned goals or to evaluate your current conservation efforts.

5. Prioritize your future human dimensions needs

Explicitly identify and detail your future HD information needs. **What do you still want to know?** You can then use information to help **fundraise for research** that can answer human dimensions questions that tie back to JV biological goals and objectives. If you have funding, you can also use these future needs to **develop a request for proposals** from partners interested in undertaking projects to address them. You can also **promote your prioritized list of HD needs** to university researchers and graduate students who may be interested and have their own funding to work on applied conservation projects.

The **North American Bird Conservation Initiative (NABCI)** is a coalition of state and federal government agencies, private organizations, and bird initiatives in the United States working to ensure the long-term health of North America's native bird populations. Its vision is to support healthy and abundant populations of North American birds that are valued by future generations and sustained by habitats that benefit birds and people.

The NABCI Human Dimensions Subcommittee aims to integrate the science and tools of human dimensions into bird conservation.

For More Information:

NABCI Human Dimensions Subcommittee
http://nabci-us.org/how-we-work/human-dimensions/

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